



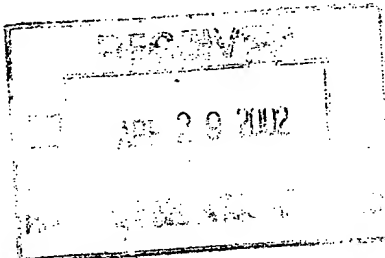
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/878,581	06/19/1997	ATSUSHI OHTANI	35.G1975	8324

5514 7590 04/22/2002

FITZPATRICK CELLA HARPER & SCINTO  
30 ROCKEFELLER PLAZA  
NEW YORK, NY 10112



EXAMINER

VU, NGOC YEN T

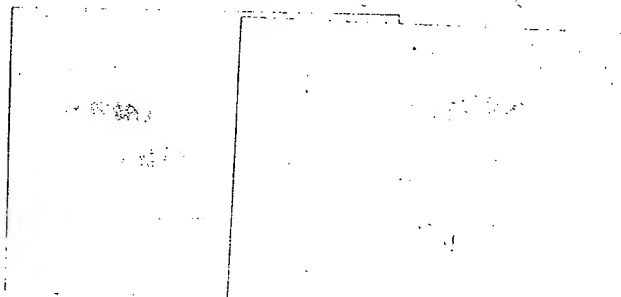
ART UNIT PAPER NUMBER

2612

DATE MAILED: 04/22/2002

#25

Please find below and/or attached an Office communication concerning this application or proceeding.



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# Office Action Summary

Application No.  
08/878,581

Applicant(s)  
Atsushi OHTANI et al.

Examiner  
Ngoc-Yen VU

Art Unit  
2612

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jan 16, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1, 5-8, 12, 14, 18-21, 25, 27, 31-34, 38, and 70-117 ~~is/are~~ pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) Reg. 94-117 is/are allowed.
- 6) ☒ Claim(s) 1, 5-8, 12, 14, 18-21, 25, 27, 31-34, 38, and 70-117 ~~is/are~~ rejected.
- 7) ☐ Claim(s) (112 Reg.) is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirements.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:

- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 21
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_

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***Important Notice***

Effective February 01, 2002, this application will be assigned to a different Examiner than the Examiner that worked on the previous Office actions. Please include the new Examiner's name in the caption or heading of any communication submitted after the February 01, 2002 date. Your cooperation in this matter will assist in the timely processing of the submission and is appreciated by the Office.

***Request for Continued Examination***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/07/2001 has been entered.

***Claim Objections***

2. ~~Claims 1, 5-8, 14, 18-21, 31-34, 70, 75-76, 78, 83-84, 86, 91-92, 94, 99-100, 102, 105-~~

108, 110, and 113-116 are objected to because of the following informalities:

*o/r* Claim 1: line 14, change "a one-line sensing period" to --the one-line sensing period--.

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OK Claim 5: line 1, claim 5 depends on the canceled claim 4; line 2, change "controlling means" to --control unit--; line 3, change "said plurality of light sources" to --the first, the second, and the third light sources--; line 3, change "said image sensing means" to --said sensing unit--.

OK Claim 6: line 1, claim 5 depends on the canceled claim 4; line 2, change "controlling means" to --control unit--; line 3, change "said plurality of light sources" to --the first, the second, and the third light sources--; line 3, change "said image sensing means" to --said sensing unit--.

OK Claim 7: line 2, change "a one-line sensing period" to --the one-line sensing period--.

OK Claim 8: line 2, change "a one-line sensing period" to --the one-line sensing period--.

OK Claim 14: line 12, change "a one-line sensing period" to --the one-line sensing period--.

OK Claim 18: line 2, claim 18 depends on the canceled claim 17; line 2, change "said plurality of light sources" to --the first, the second, and the third light sources--.

OK Claim 19: line 2, claim 19 depends on the canceled claim 17; line 2, change "said plurality of light sources" to --the first, the second, and the third light sources--.

OK Claim 20: line 2, change "a one-line sensing period" to --the one-line sensing period--.

OK Claim 21: line 2, change "a one-line sensing period" to --the one-line sensing period--.

OK Claim 31: line 2, claim 31 depends on the canceled claim 30; line 2, change "said plurality of light sources" to --the first, the second, and the third light sources--.

OK Claim 32: line 2, claim 32 depends on the canceled claim 30; line 2, change "said plurality of light sources" to --the first, the second, and the third light sources--.

OK Claim 33: line 2, change "a one-line sensing period" to --the one-line sensing period--.

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Claim 34: line 2, change "a one-line sensing period" to --the one-line sensing period--.

Claim 70: line 13, change "a one-line sensing period" to --the one-line sensing period--.

Claim 75: line 2, change "a one-line sensing period" to --the one-line sensing period--.

Claim 76: line 2, change "a one-line sensing period" to --the one-line sensing period--.

Claim 78: line 10, change "a one-line sensing period" to --the one-line sensing period--.

Claim 83: line 2, change "a one-line sensing period" to --the one-line sensing period--.

Claim 84: line 2, change "a one-line sensing period" to --the one-line sensing period--.

Claims 79-85 recite the "An apparatus according to claim 78". However, claim 78 is a method claim. It is suggested that claims 79/85 are amended to read as method claims.

Claim 86: line 10, change "a one-line sensing period" to --the one-line sensing period--.

Claim 91: line 10, change "a one-line sensing period" to --the one-line sensing period--.

Claim 92: line 10, change "a one-line sensing period" to --the one-line sensing period--.

Claim 94: line 11, change "a trigger signal" to --the trigger signal--; line 13, change "a one-line sensing period" to --the one-line sensing period--.

Claim 99: line 10, change "a one-line sensing period" to --the one-line sensing period--.

Claim 100: line 10, change "a one-line sensing period" to --the one-line sensing period--.

Claim 102: line 8, change "a trigger signal" to --the trigger signal--; line 10, change "a one-line sensing period" to --the one-line sensing period--.

Claim 105: line 2, change "said plurality of light rays" to --the first, the second, and the third lights--.

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Claim 106: line 2, change "said plurality of light rays" to --the first, the second, and the third lights--.

Claim 107: line 2, change "a one-line sensing period" to --the one-line sensing period--.

Claim 108: line 2, change "a one-line sensing period" to --the one-line sensing period--.

Claim 110: line 8, change "a trigger signal" to --the trigger signal--; line 10, change "a one-line sensing period" to --the one-line sensing period--.

Claim 113: line 2, change "said plurality of light rays" to --the first, the second, and the third lights--.

Claim 114: line 2, change "said plurality of light rays" to --the first, the second, and the third lights--.

Claim 115: line 2, change "a one-line sensing period" to --the one-line sensing period--.

Claim 116: line 2, change "a one-line sensing period" to --the one-line sensing period--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

~~The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.~~

3. Claims 20, 33, 79, 81-84, 87, 89, 90, 103, 105-108, 111 and 113-116 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 20 recites the limitation "the sensing unit" in line 1. There is no antecedent basis for this limitation in the claim.

Claim 33 recites the limitation "the sensing unit" in line 1. There is no antecedent basis for this limitation in the claim.

Claim 79 recites the limitation "the sensing unit" in line 2. There is no antecedent basis for this limitation in the claim.

Claim 81 recites the limitations "the light source control unit", "the light source", and "the sensing unit" in lines 1-2. There is no antecedent basis for these limitations in the claim.

Claim 82 recites the limitations "the light source control unit", "the light source", and "the sensing unit" in lines 1-2. There is no antecedent basis for these limitations in the claim.

Claim 83 recites the limitation "the sensing unit" in line 1. There is no antecedent basis for this limitation in the claim.

Claim 84 recites the limitation "the sensing unit" in line 1. There is no antecedent basis for this limitation in the claim.

Claim 87 recites the limitation "the sensing unit" in line 2. There is no antecedent basis for this limitation in the claim.

Claim 89 recites the limitations "the light source control unit", "the light source", and "the sensing unit" in lines 1-2. There is no antecedent basis for these limitations in the claim.

Claim 90 recites the limitations "the light source control unit", "the light source", and "the sensing unit" in lines 1-2. There is no antecedent basis for these limitations in the claim.

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Claim 103 recites the limitation "the sensing unit" in line 2. There is no antecedent basis for this limitation in the claim.

Claim 105 recites the limitations "the light source control unit", "the light source", and "the sensing unit" in lines 1-2. There is no antecedent basis for these limitations in the claim.

Claim 106 recites the limitations "the light source control unit", "the light source", and "the sensing unit" in lines 1-2. There is no antecedent basis for these limitations in the claim.

Claim 107 recites the limitation "the sensing unit" in line 1. There is no antecedent basis for this limitation in the claim.

Claim 108 recites the limitation "the sensing unit" in line 1. There is no antecedent basis for this limitation in the claim.

Claim 111 recites the limitation "the sensing unit" in line 2. There is no antecedent basis for this limitation in the claim.

Claim 113 recites the limitations "the light source control unit", "the light source", and "the sensing unit" in lines 1-2. There is no antecedent basis for these limitations in the claim.

Claim 114 recites the limitations "the light source control unit", "the light source", and "the sensing unit" in lines 1-2. There is no antecedent basis for these limitations in the claim.

Claim 115 recites the limitation "the sensing unit" in line 1. There is no antecedent basis for this limitation in the claim.

Claim 116 recites the limitation "the sensing unit" in line 1. There is no antecedent basis for this limitation in the claim.

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*Claim Rejections - 35 USC § 102*

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 70-73, 75-81, 83-85, 86-89 and 91-93 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagano (US #4,731,661).

Regarding Claim 70, Nagano '661 teaches in figure 1 an image sensing apparatus comprising a light source which emits first light (R 3), second light (G 4), and third light (B 5) which are different in wavelength (col. 2 lines 30+); a signal generator unit (control unit 10) which generates a trigger signal for triggering an operation of sensing one line of an image (col. 3 line 16 - col. 4 line 63); a sensing unit (CCD 8) which, in response to the trigger signal, outputs a signal of one line of the image illuminated by the light source (col. 2 lines 30+); and a light source controlling unit (control unit 10) which controls the light source such that the first light, the second light, and the third light are sequentially emitted in this order in a one-line sensing period (Fig. 10,  $T_{RGB}$ ) in which one line of the image is sensed by the sensing unit, and such that if a trigger signal ( $T_D$ ) is generated in a non-sensing period, emission of the first light (R) is stopped and the second light (G), the third light (B), and the first light (R) are sequentially emitted in this order, wherein the non-sensing period is such a period in the one-line sensing period, during which only the first light is emitted (Fig. 10 & see col. 5 lines 22 - col. 7 line 11).

As to Claim 71, Nagano '661 teaches that the first light (R) is light which is first emitted at the beginning of a sensing operation performed by the sensing unit (Fig. 10,  $T_R$  &  $P_R$ ).

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As to Claim 72, Nagano '661 teaches that the light source controlling unit controls the light sources so that the first light (R) needs a long time to turn on than the second and third light (See the R reflection energy in Fig. 10).

As to Claim 73, Nagano '661 teaches that the light source controlling unit sequentially turns on the plurality of light sources so that the image sensing means may sense an image in a color mode (col. 1 lines 14-23).

As to Claim 75, Nagano teaches that the sensing unit outputs a signal a plurality of times during the one-line sensing period (Fig. 10,  $T_{RGB}$ ).

As to Claim 76, Nagano teaches that the sensing unit outputs once during the one-line sensing period (Fig. 1,  $V_d$ ).

As to Claim 77, Nagano '661 teaches that the first light, the second light, and the third light are each of red light, green light, and blue light (col. 2 lines 30+).

Regarding claims 78-81 and 83-85, they are method claims corresponding to the apparatus claims 70-73 and 75-77. Therefore, claims 78-81 and 83-85 are analyzed and rejected as previously discussed with respect to the apparatus claims 70-73 and 75-77.

Regarding Claim 86, Nagano '661 teaches a digital controller (10) inherently having a control memory in which a program is stored for controlling the color document reader. As to claims 86-89 and 91-93, they are method claims corresponding to the apparatus claims 70-73 and 75-77. Therefore, claims 86-89 and 91-93 are analyzed and rejected as previously discussed with respect to the apparatus claims 70-73 and 75-77.

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*Claim Rejections - 35 USC § 103*

4. Claims 74, 82 and 90 are rejected under 35 USC 103(a) as being unpatentable over Nagano '661 in view of Lim et al. (US # 5,532,825).

As to Claim 74, Nagano '661 teaches that the light source controlling unit sequentially turns on the plurality of light sources but the mode of operation is a color image and not a monochrome image.

However, Lim '825 teaches arranging an image sensing device so as to sense an image in a monochromatic mode (col. 1 lines 15-21) using sequential illumination by a plurality of light sources (col. 4 lines 49-51), the Lim's device clearly being able to process its image data in such a way as to generate both color and monochrome images. It is clear from the teaching in Lim that the image data generated in response to sequential color illumination may be processed in such a way as to generate a monochromatic image. Provision of such processing in Nagano clearly would increase its utility by enabling the production of monochrome as well as color images in response to its sequential illumination operation. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to configure the Nagano device so as to sense an image in a monochromatic mode from its sequential illumination operation in order to increase the utility of the device by providing a monochromatic operating mode in addition to the color mode of operation.

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As to claims 82 and 90, they are method claims corresponding to the apparatus claim 74. Therefore, claims 82 and 90 are analyzed and rejected as previously discussed with respect to the apparatus claim 82.

*Allowable Subject Matter*

6. Claims 1, 5-8, 12, 14, 18-21, 25, 27, 31-34, 38 and 94-117 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, set forth in this Office action.

*Conclusion*

7. Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry)

~~(for informal or draft communications; please label~~

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA.,  
Sixth Floor (Receptionist).

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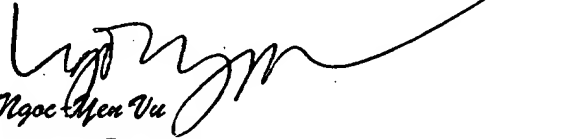
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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Ngoc-Yen Vu** whose telephone number is (703) 305-4946. The examiner can normally be reached on Mon - Fri from 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Wendy Garber**, can be reached on (703) 305-4929.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

NYV  
04/18/2002

  
*Ngoc-Yen Vu*  
*Patent Examiner*  
*Group Art Unit 2612*

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